

MINOR SOURCE OPERATING PERMIT OFFICE OF AIR MANAGEMENT

**Keener Printing and Lithography, Inc.
411 West Indiana Avenue
South Bend, Indiana 46624**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

This permit is also issued under the provisions of 326 IAC 2-2, 40 CFR 52.21, and 40 CFR 52.124 (Prevention of Significant Deterioration), with conditions listed on the attached pages.

This permit is also issued under the provisions of 326 IAC 2-3 (Emission Offset), with conditions listed on the attached pages

Operation Permit No.: MSOP 141-12213-00099	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: Expiration Date:

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary printing press source.

Authorized Individual:	Larry Kinney
Source Address:	411 West Indiana Avenue, South Bend, Indiana 46624
Mailing Address:	P.O. Box 2346, South Bend, Indiana 46624
Phone Number:	219 232-1413
SIC Code:	2791
County Location:	St. Joseph
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-5, press #1, installed in 1988, maximum printing width 25.5 inches, capacity: 120 feet per minute.
- (b) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-2P, press #2, installed in 1988, maximum printing width 25.5 inches, capacity: 105 feet per minute.
- (c) One (1) lithographic sheet-fed printing press, known as AB Dick 2+2, press #5, installed in 1988, maximum printing width 17.0 inches, capacity: 85 feet per minute.
- (d) Two (2) natural gas-fired furnaces, known as H-1 and H-2, rated at 0.400 and 0.128 million British thermal units per hour, respectively, installed in 1988.
- (e) One (1) lithographic sheet-fed printing press, known as Speedmaster 102, press #6, installed in 1996, exhausted to Stack S-1, maximum printing width 40.0 inches, capacity: 105 feet per minute.
- (f) One (1) lithographic sheet-fed printing press, known as ATF Chief 217, press #7, maximum printing width 11 inches, installed in 1998, capacity: 85 feet per minute.
- (g) Three (3) natural gas-fired furnaces, known as H-3, H-4 and H-5, rated at 0.5 million British thermal units per hour, each.
- (h) One (1) natural gas-fired heat pump, known as HP-6, rated at 0.5 million British thermal units

per hour.

SECTION B

GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of VOC, NO_x, PM, PM₁₀, SO₂, and CO is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit PM₁₀, NO_x, SO₂, CO or VOC to 100 tons per year from this source, shall cause this source to be considered a major source under 326 IAC 2-7, and shall require approval from IDEM, OAM prior to making the change.

C.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-7]

Any change or modification which may increase potential to emit to ten (10) tons per year of any single hazardous air pollutant, twenty-five (25) tons per year of any combination of hazardous air pollutants from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAM prior to making the change.

C.3 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.4 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.

- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.9 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.10 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

- (a) Compliance testing on new emissions units shall be conducted within sixty (60) days after achieving maximum production rate, but no later than one hundred eighty (180) days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two (2) weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM, within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air

Management (OAM) or appointed representative upon request.

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a) (1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 Annual Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to

implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) The report required in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (c) Unless otherwise specified in this permit, any quarterly or semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) A malfunction as described in 326 IAC 1-6-2; or
 - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
 - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

- (e) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (f) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.19 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015
- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-5, press #1, installed in 1988, maximum printing width 25.5 inches, capacity: 120 feet per minute.
- (b) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-2P, press #2, installed in 1988, maximum printing width 25.5 inches, capacity: 105 feet per minute.
- (c) One (1) lithographic sheet-fed printing press, known as AB Dick 2+2, press #5, installed in 1988, maximum printing width 17.0 inches, capacity: 85 feet per minute.
- (d) Two (2) natural gas-fired furnaces, known as H-1 and H-2, rated at 0.400 and 0.128 million British thermal units per hour, respectively, installed in 1988.
- (e) One (1) lithographic sheet-fed printing press, known as Speedmaster 102, press #6, installed in 1996, exhausted to Stack S-1, maximum printing width 40.0 inches, capacity: 105 feet per minute.
- (f) One (1) lithographic sheet-fed printing press, known as ATF Chief 217, press #7, maximum printing width 11 inches, installed in 1998, capacity: 85 feet per minute.
- (g) Three (3) natural gas-fired furnaces, known as H-3, H-4 and H-5, rated at 0.5 million British thermal units per hour, each.
- (h) One (1) natural gas-fired heat pump, known as HP-6, rated at 0.5 million British thermal units per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

D.1.1 New facilities: general reduction requirements [326 IAC 8-1-6]

Any change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year or more from any of these five (5) presses, on an individual basis, shall obtain prior approval from IDEM, OAM and the press or presses shall be subject to the requirements of 326 IAC 8-1-6.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.2 Record Keeping Requirements

- (a) To insure compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to confirm that the potential to emit VOC from any of the five (5) presses does not increase to twenty-five (25) tons per year or more.
 - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The cleanup solvent usage for each month;

- (4) The total VOC usage for each month; and
 - (5) The weight of VOCs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?____, 25 TONS/YEAR SULFUR DIOXIDE ?____, 25 TONS/YEAR NITROGEN OXIDES ?____, 25 TONS/YEAR VOC ?____, 25 TONS/YEAR HYDROGEN SULFIDE ?____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?____, 25 TONS/YEAR FLUORIDES ?____, 100 TONS/YEAR CARBON MONOXIDE ?____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. : _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM / PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____
*SEE PAGE 2

PAGE 1 OF 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

* **Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Keener Printing and Lithography, Inc.
Address:	411 West Indiana Avenue
City:	South Bend, Indiana 46624
Phone #:	219-232-1413
MSOP #:	141-12213-00099

I hereby certify that Keener Printing and Lithographic, Inc. is ☒ still in operation.
☐ no longer in operation.

I hereby certify that Keener Printing and Lithographic, Inc. is ☒ in compliance with the requirements of MSOP **141-12213-00099**.
☐ not in compliance with the requirements of MSOP **141-12213-00099**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Keener Printing and Lithography, Inc.
Source Location: 411 West Indiana Avenue, South Bend, Indiana 46624
County: St. Joseph
Construction Permit No.: MSOP 141-12213-00099
SIC Code: 2791
Permit Reviewer: Frank P. Castelli

On December 4, 2000, the Office of Air Management (OAM) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that Keener Printing and Lithography, Inc. had applied for a permit to operate a printing press source. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 28, 2000, Laura Krejchi of Cornerstone Environmental, consultant to Keener Printing and Lithography, Inc., submitted comments on the proposed operating permit. The summary of the comments and corresponding responses are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

Condition C.18(a) states "the report required in (a) of this condition and reports required. . ." however there is not a report required in (a) of C.18. I think the line should read instead "the report required in C.19(a) and reports required. . ."

Response 1:

Condition C.18(a) has been revised as follows:

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) The report required in ~~(a) of this condition and reports required by conditions in~~ Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
 Compliance Data Section, Office of Air Management
 100 North Senate Avenue, P. O. Box 6015
 Indianapolis, Indiana 46206-6015

Comment 2:

Please clarify with the requirements of C.15 and C.19. Will the first emission statement be due April 15, 2001 or April 15, 2002? For the annual notification required in C.19, it is our assumption that the first report shall not be due until March 1, 2002 since it covers the previous calendar year and this permit was not issued in 2000. When is the first annual notification for this facility due?

Keener Printing and Lithography, Inc.
South Bend, Indiana
Permit Reviewer: FPC/MES

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Response 2:

As stated in Condition C.15, the annual emission statement is due April 15 of each year and covers the previous December 1 through November 30 period. In this case the first report will be due on April 15, 2001 and should cover the source's emissions from the period of December 1, 1999 through November 30, 2000 since it is located in St. Joseph County. IDEM's Emissions Data Section confirms the April 15, 2001 submittal requirement.

As stated in Condition C.19, the annual notification shall be submitted to the Office of Air Quality no later than March 1 of each year, in this case by March 1, 2002, and cover the period of January 1 through December 31, 2001.

Comment 3:

We would like Condition D.1.1 clarified. I think it should read "Any change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year or more from any one of these five (5) presses. . . This will clarify that each press has a 25-ton a year limitation, not all five presses combined.

Response 3:

Condition D.1.1 has been revised as follows to clarify that the change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year refers to each press individually.

D.1.1 New facilities: general reduction requirements [326 IAC 8-1-6]

Any change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year or more from any of these five (5) presses, **on an individual basis**, shall obtain prior approval from IDEM, OAM and **the press or presses** shall be subject to the requirements of 326 IAC 8-1-6.

Comment 4:

Why is there a record keeping requirement in Condition D.1.2? This states "To insure compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (5) below". The potential to emit of any one press is not greater than 25 tons so why is record keeping required to prove that each press is not emitting more than 25 tons? If the potential to emit were to increase to greater than 25 tons for a single press, a modification to the MSOP would be required by Condition D.1.1.

Response 4:

Record keeping is required to verify that the VOC emissions from these facilities comply with Condition D.1.1. Record keeping of VOC emissions are also required for the source to be able to submit the annual emission statement pursuant to 326 IAC 2-6.

Comment 5:

In addition to the two furnaces listed in A.2(d) there are also 3 other furnaces located on the old part of the building and there is also a heat pump in the old part of the building. All four units are 500,000

Btu per hour (0.5 mmBtu/hr). There are no applicable requirements for these units.

Response 5:

Condition A.2 and Section D.1 have had the following equipment added that were not contained in the application. The potential emissions from these additional furnaces and heat pump have been included in the revised spreadsheet, pages 3 and 4 of the TSD Appendix A, that has been attached. The following table has been updated from the Technical Support Document to reflect the potential after controls and limits from these addition combustion units:

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-5, press #1, installed in 1988, maximum printing width 25.5 inches, capacity: 120 feet per minute.
- (b) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-2P, press #2, installed in 1988, maximum printing width 25.5 inches, capacity: 105 feet per minute.
- (c) One (1) lithographic sheet-fed printing press, known as AB Dick 2+2, press #5, installed in 1988, maximum printing width 17.0 inches, capacity: 85 feet per minute.
- (d) Two (2) natural gas-fired furnaces, known as H-1 and H-2, rated at 0.400 and 0.128 million British thermal units per hour, respectively, installed in 1988.
- (e) One (1) lithographic sheet-fed printing press, known as Speedmaster 102, press #6, installed in 1996, exhausted to Stack S-1, maximum printing width 40.0 inches, capacity: 105 feet per minute.
- (f) One (1) lithographic sheet-fed printing press, known as ATF Chief 217, press #7, maximum printing width 11 inches, installed in 1998, capacity: 85 feet per minute.
- (g) Three (3) natural gas-fired furnaces, known as H-3, H-4 and H-5, rated at 0.5 million British thermal units per hour, each.**
- (h) One (1) natural gas-fired heat pump, known as HP-6, rated at 0.5 million British thermal units per hour.**

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Press #1	0.00	0.00	0.00	8.25	0.00	0.00	8.28
Press #2	0.00	0.00	0.00	7.22	0.00	0.00	
Press #5	0.00	0.00	0.00	2.76	0.00	0.00	
Press #6	0.00	0.00	0.00	11.3	0.00	0.00	
Press #7	0.00	0.00	0.00	1.78	0.00	0.00	
Furnaces & Heat Pump	0.004 0.021	0.018 0.084	0.004 0.007	0.013 0.061	0.194 0.930	0.234 1.11	0.010 0.050
Total Emissions	0.004 0.021	0.018 0.084	0.004 0.007	31.3 31.4	0.194 0.930	0.234 1.11	8.29 8.33

This existing source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

The addition of these natural gas combustion units do not have any applicable rules and therefore no other conditions of the permit have been revised.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name:	Keener Printing and Lithography, Inc.
Source Location:	411 West Indiana Avenue, South Bend, Indiana 46224
County:	St. Joseph
SIC Code:	2791
Operation Permit No.:	MSOP 141-12213-00099
Permit Reviewer:	Frank P. Castelli

The Office of Air Management (OAM) has reviewed an application from Keener Printing and Lithography, Inc. relating to the construction and operation of a printing press source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-5, press #1, installed in 1988, maximum printing width 25.5 inches, capacity: 120 feet per minute.
- (b) One (1) lithographic sheet-fed printing press, known as Heidelberg MO-2P, press #2, installed in 1988, maximum printing width 25.5 inches, capacity: 105 feet per minute.
- (c) One (1) lithographic sheet-fed printing press, known as AB Dick 2+2, press #5, installed in 1988, maximum printing width 17.0 inches, capacity: 85 feet per minute.
- (d) Two (2) natural gas-fired furnaces, known as H-1 and H-2, rated at 0.400 and 0.128 million British thermal units per hour, respectively, installed in 1988.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

- (e) One (1) lithographic sheet-fed printing press, known as Speedmaster 102, press #6, installed in 1996, exhausted to Stack S-1, maximum printing width 40.0 inches, capacity: 105 feet per minute.
- (f) One (1) lithographic sheet-fed printing press, known as ATF Chief 217, press #7, maximum printing width 11 inches, installed in 1998, capacity: 85 feet per minute.

Keener Printing and Lithography, Inc.
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Emission Units and Pollution Control Equipment Removed From Service

- (g) One (1) Heidelberg lithographic sheet-fed printing press, model # GTO serial # 652035, known as press #3, maximum printing width 18 inches, installed in 1995 , capacity: 85 feet per minute. (removed from service)
- (h) One (1) ATF Davison lithographic sheet-fed printing press, model # MO215C serial # 21554353, known as press #4, maximum printing width 15 inches, installed in 1995, capacity: 85 feet per minute. (removed from service)

New Emission Units and Pollution Control Equipment

There are no new facilities proposed at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

CP 141-4587-00099, issued on August 23, 1995.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S-1	Press #6	9.5	1.0	500	70

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 28, 2000, with additional information received on July 18, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations on pages 1-4 of 4.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.004
PM ₁₀	0.018
SO ₂	0.001
VOC	31.3
CO	0.194
NO _x	0.231

HAPs	Potential To Emit (tons/year)
Toluene	7.91
Methanol	0.196
Glycol Ether	0.175
Benzene	0.000005
Dichlorobenzene	0.000003
Formaldehyde	0.0002
Hexane	0.004
Lead Compounds	0.000001
Cadmium Compounds	0.000003
Chromium Compounds	0.000003
Manganese Compounds	0.0000009
Nickel Compounds	0.000005
TOTAL	8.29

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of volatile organic compounds are equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.

Keener Printing and Lithography, Inc.
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(b) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPS
Press #1	0.00	0.00	0.00	8.25	0.00	0.00	8.28
Press #2	0.00	0.00	0.00	7.22	0.00	0.00	
Press #5	0.00	0.00	0.00	2.76	0.00	0.00	
Press #6	0.00	0.00	0.00	11.3	0.00	0.00	
Press #7	0.00	0.00	0.00	1.78	0.00	0.00	
Furnaces	0.004	0.018	0.001	0.013	0.194	0.231	0.010
Total Emissions	0.004	0.018	0.001	31.3	0.194	0.231	8.29

This existing source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	maintenance
CO	attainment

Lead	attainment
------	------------

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) St. Joseph County has been classified as attainment or unclassifiable for all remaining pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) any combination of HAPs is less than twenty-five (25) tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source. These lithographic printing facilities are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.430, Subpart QQ) as these presses are not rotogravure.
- (b) The lithographic presses are not subject to the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63 Subpart KK (Printing & Publishing Industry) because HAPs are below the major source levels of ten (10) and twenty-five (25) tons per year for a single and combination of HAPs, respectively.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC in St. Joseph County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

Keener Printing and Lithography, Inc.
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326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (New facilities: general reduction requirements)

This rule may apply to new facilities as of January 1, 1980. Since the potential VOC emissions from each of the five (5) printing presses are less than twenty-five (25) tons per year, 326 IAC 8-1-6 does not apply to these facilities. Any change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year or more from any of these five (5) presses, shall obtain prior approval from IDEM, OAM.

326 IAC 8-5-5 (Miscellaneous Operations: Graphic Arts Operations)

Since all five (5) printing presses are lithographic and are not rotogravure or flexographic, this source is not subject to the requirement of this rule

Conclusion

The operation of this printing press source shall be subject to the conditions of the attached proposed Minor Source Operating Permit 141-12213-00099.

**Appendix A: Emissions Calculations
VOC From Printing Press Operations**

Page 1 of 4 TSD App A

Company Name: Keener Printing and Lithography, Inc.
Address City IN Zip: 411 West Indiana Avenue, South Bend, Indiana 46624
MSOP: 141-12213
Plt ID: 141-00099
Reviewer: Frank P. Castelli
Date: April 28, 2000

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin ² /YEAR
#1	120	25.5	19300
#2	105	25.5	16888
#5	85	17.0	9114
#6	105	40.0	26490
#7	85	11.0	5897

INK/Solvents VOCS					
Ink/Solvent Material Name Press Id	Maxium Coverage (lbs/MMin ²)	Weight % Volatiles*	Flash Off %	Throughput (MMin ² /Year)	Emissions (tons/year)
Press #1					
Braden Sutphin Inks	1.000	19.8%	100.00%	19300	1.91
IPA	0.250	100.0%	100.00%	19300	2.41
Kwik Dry	0.050	100.0%	100.00%	19300	0.48
Varnishes	0.200	15.1%	100.00%	19300	0.29
Rosos Fountain Solution	0.050	9.0%	100.00%	19300	0.04
Ashland Type Wash	0.400	78.0%	100.00%	19300	3.01
Varn Wash 1	0.015	66.1%	100.00%	19300	0.10
				Subtotal	8.25
Press #2					
Braden Sutphin Inks	1.000	19.8%	100.00%	16888	1.67
IPA	0.250	100.0%	100.00%	16888	2.11
Kwik Dry	0.050	100.0%	100.00%	16888	0.42
Varnishes	0.200	15.1%	100.00%	16888	0.26
Rosos Fountain Solution	0.050	9.0%	100.00%	16888	0.04
Ashland Type Wash	0.400	78.0%	100.00%	16888	2.63
Varn Wash 1	0.015	66.1%	100.00%	16888	0.08
				Subtotal	7.22
Press #5					
Braden Sutphin Inks	1.000	19.8%	100.00%	9114	0.90
IPA	0.000	100.0%	100.00%	9114	0.00
Kwik Dry	0.050	100.0%	100.00%	9114	0.23
Varnishes	0.200	15.1%	100.00%	9114	0.14
Rosos Fountain Solution	0.050	9.0%	100.00%	9114	0.02
Ashland Type Wash	0.400	78.0%	100.00%	9114	1.42
Varn Wash 1	0.015	66.1%	100.00%	9114	0.05
				Subtotal	2.76
Press #6					
Braden Sutphin Inks	1.000	19.8%	100.00%	26490	2.62
IPA	0.250	100.0%	100.00%	26490	3.31
Kwik Dry	0.050	100.0%	100.00%	26490	0.66
Varnishes	0.200	15.1%	100.00%	26490	0.40
Rosos Fountain Solution	0.050	9.0%	100.00%	26490	0.06
Ashland Type Wash	0.400	78.0%	100.00%	26490	4.13
Varn Wash 1	0.015	66.1%	100.00%	26490	0.13
				Subtotal	11.32
Press #7					
Braden Sutphin Inks	1.000	19.8%	100.00%	5897	0.58
IPA	0.000	100.0%	100.00%	5897	0.00
Kwik Dry	0.050	100.0%	100.00%	5897	0.15
Varnishes	0.200	15.1%	100.00%	5897	0.09
Rosos Fountain Solution	0.050	9.0%	100.00%	5897	0.01
Ashland Type Wash	0.400	78.0%	100.00%	5897	0.92
Varn Wash 1	0.015	66.1%	100.00%	5897	0.03
				Subtotal	1.78

Total VOC Emissions =	31.32	Ton/yr
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*VOC (Tons/Year) = Maximum Coverage pounds per MMin² * Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) * Flash off * Throughput * 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MMin² per Year

VOC = Maximum Coverage pounds per MMin² * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93))

HAP Emission Calculations

Company Name: Keener Printing and Lithography, Inc.
Address City IN Zip: 411 West Indiana Avenue, South Bend, Indiana 46624
MSOP: 141-12213
Plt ID: 141-00099
Reviewer: Frank P. Castelli
Date: April 28, 2000

Press **MMin²/yr**
 #1 19300
 #2 16888
 #5 9114
 #6 26490
 #7 5897
Print rate = **77689.0** **MMin²/yr**

Material	Usage (lbs/MM in ²)	Maximum (MM in ² /yr)	Flash-off (fraction)	Weight % Toluene	Weight % Glycol Ethers	Weight % Methanol		Toluene Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Methanol Emissions (tons/yr)
All Presses #1, #2, #5, #6 and #7										
Braden Sutphin Inks	1.000	77689.0	80%	0.00%	0.00%	0.00%		0.00	0.00	0.00
IPA	0.250	77689.0	100%	0.00%	0.00%	0.00%		0.00	0.00	0.00
Kwik Dry	0.050	77689.0	100%	0.00%	0.00%	0.00%		0.00	0.00	0.00
Varnishes	0.200	77689.0	100%	0.00%	0.00%	0.00%		0.00	0.00	0.00
Rosos Fountain Solution	0.050	77689.0	100%	0.00%	9.00%	0.00%		0.00	0.17	0.00
Ashland Type Wash	0.400	77689.0	100%	50.90%	0.00%	1.26%		7.91	0.00	0.20
Varn Wash 1	0.015	77689.0	100%	0.00%	0.00%	0.00%		0.00	0.00	0.00
								7.91	0.175	0.196

Total HAPs 8.28 tons/yr

METHODOLOGY

HAPs emission rate (tons/yr) = Usage (lbs/mm in²) * Potential Throughput (mm in²/yr) * Weight % HAP * 1 ton/2000 lbs * Flash-off (%)

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

Revised 1/4/01

to add additional
combustion units

Company Name: Keener Printing and Lithography, Inc.
Address City IN Zip: 411 West Indiana Avenue, South Bend, Indiana 46624
MSOP: 141-12213
Plt ID: 141-00099
Reviewer: Frank P. Castelli
Date: April 28, 2000

Two (2) Furnaces, H-1 & H-2
Rated at 0.400 & 0.128 mmBtu/hr

Three (3) Furnaces, H-3, H-4 and H-5 and
a Heat Pump, H-6, Each Rated at 0.5 mmBtu/hr

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

2.528

22.15

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.021	0.084	0.007	1.11	0.061	0.930

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 4 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Page 4 of 4 TSD App A

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: Keener Printing and Lithography, Inc.
Address City IN Zip: 411 West Indiana Avenue, South Bend, Indiana 46624
MSOP: 141-12213
Plt ID: 141-00099
Reviewer: Frank P. Castelli
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HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.325E-05	1.329E-05	8.304E-04	1.993E-02	3.765E-05

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	5.536E-06	1.218E-05	1.550E-05	4.208E-06	2.325E-05

Methodology is the same as page 3.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.